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10/076,270	02/19/2002	Robert Kopetzky	076326-0228	1060
22428	7590	08/26/2004	EXAMINER	
FOLEY AND LARDNER SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			HAUGLAND, SCOTT J	
			ART UNIT	PAPER NUMBER
			3654	

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/076,270  
Filing Date: February 19, 2002  
Appellant(s): KOPETZKY ET AL.

**MAILED**

**AUG 26 2004**

**GROUP 3600**

Howard N. Shipley and Frederic T. Tenney  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed May 5, 2004.

**(1) Real Party in Interest**

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A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) *Summary of Invention***

The summary of invention contained in the brief is correct.

**(6) *Issues***

The appellant's statement of the issues in the brief is correct.

**(7) *Grouping of Claims***

Appellant's brief includes a statement that claims 11-20 stand or fall together. While the brief separately argues claims 11 and 12, none of the arguments address any features that are specific to claims 11 and 12. The arguments are, therefore, consistent with this grouping.

**(8) *Claims Appealed***

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) *Prior Art of Record***

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5,553,803	Mitzkus et al	9-1996
6,250,720	Wier	6-2001
2,889,163	Stephens et al	6-1959

**(10) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 11 and 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitzkus et al in view of Wier.

Mitzkus et al discloses a safety belt tensioner drive unit comprising a drive shaft coupled to a belt winding reel and capable of being triggered, a drive chamber formed by two connected plates 51, 52 which extend parallel to one another, drive bands 21 having ends fastened to the drive shaft and wound on the drive shaft, and a gas generator responsive to an acceleration sensor. Exposure of the chamber and band to pressurized gas from the gas generator causes the drive band to unwind and drive the drive shaft.

Mitzkus et al does not disclose a coating material on the facing sides of the plates.

Wier teaches providing a coating (wax or other material – see column 6, lines 1-6) on one of engaging relatively moving surfaces that define an enclosed chamber for containing pressurized gas which drives a safety belt tensioner to reduce gas loss from the chamber. The coating of Wier is seen to be a film.

It would have been obvious to one having ordinary skill in the art to provide Mitzkus et al with a film of coating material such as wax between the

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plates and band as taught by Wier to enhance gas retention in the drive chamber. It would have been obvious to include the coating material on the plates forming the chamber to ensure adequate material to maintain the desired seal throughout the range of motion of the band. With regard to claim 14, it would have been obvious to provide a coating of varying thickness as taught by Wier to accommodate variations in spacing and thickness of the plates. With regard to claim 16 and 17, the materials taught by Wier are seen to be soft and have adhesive properties. With regard to claims 18 and 19, the band would inherently penetrate and remove some of the coating material if the soft coating material were placed to bridge the gap between the band and plates as taught by Wier.

Claims 12 and 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Mitzkus et al in view of Wier as applied to claim 11 above, and further in view of Stephens et al.

Mitzkus et al does not disclose a plurality of layers of coating material on the plates forming the drive chamber.

Stephens et al teaches providing a plurality of layers of coating material on a machine element to form a seal. Note column 4, lines 66-69.

It would have been obvious to one having ordinary skill in the art to provide a plurality of layers of coating material on the plates of Mitzkus et al as taught by Stephens et al to form a seal with the band. With regard to claim 13, it would have been obvious to provide an additional layer of a different material

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such as a lubricant on the plates to reduce friction between the plates and band as is old and well known.

**(11) Response to Argument**

Applicants argue that it would not have been obvious to one having ordinary skill in the art to modify the seal between the plates 51, 52 of the drive chamber and the bands 21 of Mitzkus using the teachings of Wier since there is no teaching or suggestion in the references that the seal is not sufficient.

Mitzkus may teach that the seal will work, but does not teach that it is optimal. Wier contains teachings of how to improve a seal involving a flexible element. Specifically, Wier teaches that a seal between a rigid surface and a surface of a flexible element may be improved by providing a coating on at least one of the surfaces (col. 6, lines 1-6). The coating accommodates variations in distance between the surfaces due to surface irregularities and shifting of the flexible element. The tendency for the distance between the surfaces of plates 51, 52 and the bands 21 of Mitzkus to vary would, also, have been apparent to an ordinary artisan due to inherent surface irregularities and the disclosed flexibility of the bands. Wier would have suggested providing a coating in the device of Mitzkus to improve the seal by filling any surface irregularities in the plates and bands and mitigating the effect of the flexibility of the bands.

With regard to Applicants' assertion that the presence of vents 37 in the device of Mitzkus (page 8, last paragraph), it is noted that vents 37 are located outside the pressurized chambers defined by walls 29 and bands 21. The pressurized chambers are located within chambers 23, which would be sealed if not for the vents 37. The vents allow for free expansion of pressurized chambers

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by movement of the belts. The presence of the vents teach nothing about the sufficiency of the seals and would not eliminate the desirability of improving the seals.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

*sjh*  
sjh

August 16, 2004

Conferees

Kathy Matecki *KM*  
John Jillions *jj*

FOLEY AND LARDNER  
SUITE 500  
3000 K STREET NW  
WASHINGTON, DC 20007

*Kathy Matecki*

KATHY MATECKI  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600